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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/223,472 12/30/98 LEE

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EXAMINER

LEADER, W

ART UNIT

PAPER NUMBER

1741

DATE MAILED:

10/23/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/223,472

Applicant(s)

Lee

Examiner

William Leader

Group Art Unit

1741

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 8/2/2001
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-5 and 18-33 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-5 and 18-33 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 14
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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Receipt of the request for a Continued Prosecution Application (CPA) and the preliminary amendment filed on August 2, 2001, is acknowledged. Claims 34-38 have been canceled. Claims 1-5 and 18-33 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5 and 19-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori (5,443,707) for the reasons of record and in view of the following comments.

Claims 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (5,443,707) for the reasons of record and in view of the following comments.

Claims 1, 3, 4 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi (5,830,334) for the reasons of record and in view of the following comments.

Claims 21-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (5,830,334) for the reasons of record and in view of the following

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comments.

Claims 1 and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoeda et al (5,629,913) for the reasons of record and in view of the following comments.

Claims 1, 3-5, 18, 19, 22-27 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arken et al (6,001,235) for the reasons of record and in view of the following comments.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arken et al (6,001,235) as applied to claims 1, 3-5, 18, 19, 22-27 and 29-33 above, and further in view of Mori (5,443,707) for the reasons of record and in view of the following comments.

Claims 1-5 and 18-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant has amended independent claims 1 and 18 to recite the step of directing liquid "at an angle". This limitation as written is considered to be

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indefinite because applicant has not specified what the liquid is directed at an angle to. Is it at an angle to the surface of the substrate or an angle to a wall of the enclosure, or an angle to some other element? It is noted that the expression "an angle" includes angles extending from essentially zero degrees to 180 degrees. The dependent claims are rejected for the reason given with respect to the independent claim from which they depend.

Claim 1 recites the step of exposing a surface of a substrate to a liquid, "containing in a material". The meaning of this expression is not clear. Should be word "in" be deleted or should other wording be added?

Applicant's Remarks have been carefully considered but are not deemed to be persuasive. With respect to Mori, applicant argues that the rotational flow is different than that claimed. Similarly, with respect to Kobayashi, Tomoeda and Arken, applicant argues that the flow pattern is different. This argument is not convincing because all of the references meet the claimed operative step of directing liquid from an outlet which is off-center from a central axis of the substrate normal to the surface. Applicant has not explained why this step produced one type of flow in applicant's process but a different type of flow in the processes of the references.

It is again noted that claims 1 and 18 are written in open form using the term "comprising" which allows process steps other than those specifically recited to

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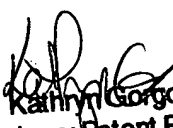
be included within the scope of the claims. The claims are open to a step of rotary or other mechanical motion which would cause rotational flow over the substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Leader, whose telephone number is (703) 308-2530. The examiner can normally be reached Mondays-Thursdays from 7:30 AM to 4:00 PM eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathryn Gorgos can be reached at (703) 308-3328. The fax phone number for *official* after final faxes is (703) 872-9311. The fax phone number for all other *official* faxes is (703) 872-9310. Unofficial communications to the Examiner should be faxed to (703) 305-7719.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0661.

W
William Leader:wtl
October 18, 2001


Kathryn Gorgos
Supervisory Patent Examiner
Technology Center 1700